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Amendments to the Claims:

1. ~~(currently amended) Shielding gas device for pressure die casting machines, in particular for processing magnesium melts, with a melting furnace (1) having openings for supplying the shielding gases, and having various gas sources and a container (21) situated downstream therefrom for receiving a mixture of the individual shielding gas components which is connected via at least one metering device (7) to the openings in the melting furnace, characterized in that~~

~~—— the container is a pressure accumulator (21);~~

~~—— the openings in the melting furnace (1) are provided with inlet nozzles (9, 9a); and~~

~~—— these inlet nozzles are impinged on by a metering device (7), the operating pressure of which is equal to or less than the pressure in the pressure accumulator (21), but is high enough to atomize the shielding gas mixture downstream from the inlet nozzles (9, 9a).~~

A shielding gas device for pressure die-casting machines, comprising:

a plurality of inlet nozzles, the inlet nozzles being configured to introduce a shielding gas mixture into a melting furnace;

a container, the container being configured to receive a mixture of individual shielding gas components from a plurality of gas sources; and

a metering device connected between the container and the inlet nozzles for metering of flow of the shielding gas mixture into the furnace, wherein

the container is a pressure accumulator, and

the metering device is configured to maintain a shielding gas mixture operating pressure at the inlet nozzles which is equal to or less than a pressure in the container, while remaining the operating pressure high enough to atomize

the shielding gas mixture downstream from the inlet nozzles.

2. (currently amended) The S shielding gas device according to Claim 1, wherein the at least one metering device meters the shielding gas mixture ~~characterized in that the metering process is performed~~ continuously or discontinuously.

3. (currently amended) The S shielding gas device according to Claim 1, wherein ~~characterized in that~~ the inlet nozzles (9, 9a) are distributed on the melting furnace (1) in such a way that rapid and uniform distribution of the shielding gas mixture is achieved.

4. (currently amended) The S shielding gas device according to Claim 3, wherein ~~characterized in that~~ the inlet nozzles (9, 9a) are placed on the melting furnace (1) in such a way that gas flows towards ~~to the~~ leakage points (45, 46) from the furnace (1) ~~that are unavoidably present~~.

5. (currently amended) The S shielding gas device according to Claim 3, ~~characterized in that~~ the inlet nozzles (9, 9a) are configured in such a way that they are protected from being wetted by a melted material in the furnace the melt, ~~and thus, from contamination or plugging~~.

6. (currently amended) The S shielding gas device according to Claim 1, wherein ~~characterized in that~~ the operating pressure ~~of the metering device (7, 7a)~~ is adapted to the type of inlet nozzles (9, 9a).

7. (currently amended) The S shielding gas device according to Claim 6, wherein ~~characterized in that~~ the operating pressure is regulated and monitored, and ~~that~~ a signal device (37) is ~~active~~ activated ~~when there are~~ deviations from a ~~the~~ desired operating pressure are detected.

8. (currently amended) The S shielding gas device according to Claim

6, wherein ~~characterized in that~~ multiple metering devices for different furnace sections ~~(39, 40)~~ or for different furnaces are connected in parallel and are fed by the container pressure accumulator (21).

9. (currently amended) The S shielding gas device according to Claim 8, wherein ~~characterized in that~~ each metering unit ~~(7, 7a)~~ is provided with a device ~~(33, 34)~~ for adjusting a flow quantity of the metered shielding gas mixture quantity.

10. (currently amended) The S shielding gas device according to Claim 9, wherein ~~characterized in that~~ an operating mode sensor ~~(34)~~ is associated with each metering unit for determining the metered quantity.

11. (currently amended) The S shielding gas device according to Claim 6, wherein ~~characterized in that~~ each metering unit ~~(7, 7a)~~ is provided with a control logic system ~~(26)~~ that receives the signals ~~(35)~~ concerning the furnace status.

12. (currently amended) The S shielding gas device according to Claim 1, further comprising ~~characterized in that~~ a mixing device ~~(2)~~ having a mixing chamber ~~(19)~~ in which the gases forming the shielding gas mixture are combined under pressure, wherein the mixing device is upstream of the container ~~is associated with the pressure accumulator (21)~~.

13. (currently amended) The S shielding gas device according to Claim 12, wherein ~~characterized in that~~ pressure nozzles ~~(20)~~ for supplying the gases to be mixed are provided on the mixing chamber ~~(19)~~.

14. (currently amended) The S shielding gas device according to Claim 12, wherein ~~characterized in that~~ pressure regulating devices ~~(14, 16)~~ are associated with the feed lines ~~(11, 12)~~ to the mixing chamber ~~(19)~~.

15. (currently amended) The S shielding gas device according to Claim 13, further comprising ~~characterized in that~~ a pressure regulating device (16) for maintaining equal pressure among gas ~~is associated with the~~ feed lines leading (11, 12) to the mixing chamber (19).

16. (currently amended) The S shielding gas device according to Claim 13, further comprising ~~characterized in that~~ a device (23) for monitoring ~~the~~ a pressure ~~is provided in a~~ the connecting line (22) between the mixing chamber (19) and the container ~~pressure accumulator~~ (21).

17. (currently amended) The S shielding gas device according to Claim 12, further comprising ~~characterized in that~~ a gas analyzer is associated with the mixing chamber (19) by which the concentration of the gas mixture may be monitored.

18. (currently amended) The S shielding gas device according to Claim 17, wherein ~~characterized in that~~ the gas analyzer compares the concentration of ~~the~~ gas mixture in the mixing chamber (19) to a reference mixture, and when there are deviations sends a signal to the mixing device (2).

~~{see source for FIGS 1 through 6}~~